

Grand Staircase-Escalante National Monument Front Country Visitors' Characteristics, Monument Management and Community Services Impressions, and Expenditures in the Monument Area

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ABSTRACT

This paper presents data collected from a study conducted during the 2004 visitation season on front country visitors to the Grand Staircase-Escalante National Monument (GSENM). Part of the study's purpose was to provide baseline information on visitors' characteristics, satisfaction with GSENM management efforts, impression of nearby communities' visitor services, and visitor expenditures in those communities as well as economic impacts to Kane and Garfield Counties from those expenditures. Visitors to the GSENM come from throughout the United States and the world. They tend to appreciate GSENM management efforts but would like to see improvements in areas such as signage and information dissemination. They were also pleased with visitor services in communities in the Monument area but would value some improvements such as a diversity of dining establishments. In the GSENM area, visitors from Utah spent an average of \$74 per person on their trip compared to \$200 for visitors from other states and \$274 for international visitors.

Keywords: front country visitors, visitor characteristics, social science survey research, outdoor recreation, recreation resource management, importance-performance analysis, IMPLAN

(IORT) at Utah State University. This study was funded by the Grand Staircase-Escalante National Monument, Bureau of Land Management (BLM). The main objective of this study was to provide baseline data concerning front country recreation uses and the interaction between visitor uses and other Monument values.

The Monument was designated to protect nearly 1.9 million acres of southern Utah in a "primitive, frontier state" and to provide outstanding opportunities for scientific research and education (U.S.D.I. Bureau of Land Management, 1999). To meet these goals, it is critical to

Introduction

The purpose of this project was to gather data from front country visitors to the Grand Staircase-Escalante National Monument (GSENM). The study was conducted by research scientists and students affiliated with the Institute for Outdoor Recreation and Tourism

protect the natural conditions of the Monument. At the same time, however, traditional uses are acceptable as long as they do not conflict with the primary purposes of the Monument. Recreation is one of the most pervasive of these traditional uses.

Visitor intercept surveys were administered at developed sites in the Front Country zone and at key dispersed use areas in both the Front Country and Passage zones of the Monument. Three slightly different versions of intercept surveys and one mail survey were developed and administered during 2004. The surveys were designed with five goals in mind:

1. Collect baseline data of visitor characteristics and use patterns for the purpose of long-term monitoring of recreation use trends.
2. Collect visitor expectation and satisfaction data useful for long term monitoring to help BLM managers understand visitor interests and preferences, and the reasons visitors do what they do.
3. Collect data on visitor images of the Monument and knowledge of scientific research results to provide baseline data for long term evaluation of informational and educational messages at visitor centers and waysides, and through community education programs.
4. Collect data on the relationship between tourism, visitor and hospitality services, and local community development.
5. Identify Monument site use levels using GIS maps and compare use with management zones.

The purpose of the following paper is to report research findings on certain visitors' characteristics, satisfaction with GSENM management efforts, impression of nearby communities' visitor services, and visitor expenditures in those communities. The complete report addressing all research objectives, *A Front Country Visitor Study for Grand Staircase-Escalante National Monument*, can be accessed at <http://extension.usu.edu/iort/html/professional/april2006>.

Study Site

On September 18, 1996, President Clinton exercised his presidential right granted through the Antiquities Act of 1906 and designated nearly 1.9 million acres in southern Utah as the Grand Staircase-Escalante National Monument (GSENM). The GSENM is the first national monument to be administered and managed by the Bureau of Land Management (BLM) and became the first national monument in the BLM's new National Landscape Conservation System. The GSENM contains many outstanding natural features including sandstone canyons, arches, desert terrain, and riparian areas on the Colorado Plateau. The GSENM is very remote; it was the last place in the continental United States to be mapped (U.S.D.I. Bureau of Land Management, 1999). The Monument is surrounded by a number of other federally managed, specially protected lands including: Glen Canyon National Recreation Area to the southeast, Capitol Reef National Park to the northeast, and Bryce Canyon National Park to the northwest, all units within the National Park System; the Dixie National Forest to the north and west, and the Paria Canyon-Vermilion Cliffs Wilderness Area on the Utah-Arizona state line, managed by the BLM. Other major visitor attractions near the GSENM are Grand Canyon National Park, Zion National Park, and Lake Powell within the Glen Canyon National Recreation area.

The GSENM itself is made up of three distinct physiographic regions: the Escalante Canyons in the northeast portion of the GSENM, the Kaiparowits Plateau making up the middle portion of the GSENM, and the Grand Staircase in the southwest portion of the GSENM. Each of these regions contains extraordinary historical, cultural, and geological features. It is from the names of these physiographic regions that the GSENM gets its name, Grand Staircase-Escalante National Monument. Unfortunately, the name can be misleading and visitors may come looking for an actual "grand staircase" on a human scale. The "grand staircase" is actually geological, made up of the Chocolate, Vermilion, White, Gray, and Pink Cliffs as they ascend in elevation from south to north across the western side of the GSENM, and can only be seen if one looks north onto the

GSENM from around the Highway 89 area just north of the Arizona-Utah border.

The intent behind the designation of this vast area of land was to protect it in a “primitive, frontier state” and to “provide outstanding opportunities for scientific research and education” (U.S.D.I. Bureau of Land Management, 1999: iv). At the time of the designation, the BLM had never before been given the responsibility of managing a national monument. With the designation, the BLM became responsible for managing the area for recreation as well as most other traditional uses. Due to this added responsibility, the managers of the GSENM felt it was important to support research that would help them understand how to best manage the area for both front country and backcountry recreation visitors.

In 1999, a backcountry visitor use survey was conducted by Dr. Mark Brunson and Lael Palmer through the Institute for Outdoor Recreation and Tourism (IORT) at Utah State University. One focus for this survey was to examine recreationists’ relationship with a newly designated national monument (Palmer, 2001). Since this backcountry visitor baseline data had been collected, it was also important for the BLM to conduct a study which would contribute baseline data on front country recreation visitors.

According to the BLM, approximately 600,000 people visit the GSENM every year, and recreational use is increasing. BLM managers believe that most visits occur in the Front Country and Passage zones, which comprise only about 6% (116,372 acres) of the Monument at the periphery and along major transportation routes. The management plan for the GSENM calls for a continuation of this concentrated visitor use pattern. The concentration of visitors on a relatively small portion of the GSENM can help managers meet the dual goals of providing recreation while protecting most of the area from many recreational impacts. The success of the zoning strategy, however, is dependent on understanding and monitoring visitor use patterns and perceptions of crowding, understanding the relationship between visitor behavior and the natural environment, and using informa-

tion and education to increase visitor appreciation for the GSENM and to reduce visitor impacts.

Background Literature

The social sciences lag behind the biophysical sciences in providing data that are relevant for ecosystem-based management (Lee, 1993; Blahna, 1995). In the past, research on recreation use in protected areas has been hindered by narrow, site-specific data collection efforts which have proved to be of marginal value for protected area planning and management (Borrie, McCool, & Stankey, 1998). Furthermore, while backcountry recreation experiences have been widely studied (Hammit & Cole, 1998) few research efforts have focused on dispersed, motorized recreation activities. Likewise, we know that recreation experiences can be enhanced by the presence of biological or cultural resources (Knight & Gutzwiller, 1995; Wang, Anderson, & Jakes, 1996), but little or no research has specifically examined these interactions on the Colorado Plateau, or compared the interests and values of visitors to dispersed and developed sites. Visitor interaction with local communities is also a key concern for Monument staff, but there are few large-scale studies of these interactions. Through the use of the front country visitor surveys, baseline data was collected in order to examine these issues.

There are also large gaps in our understanding of the link between science literacy and informational and educational programs of protected areas. Science literacy is a critical element of positive environmental attitudes and behavior and enhancement of scientific literacy among the public is a primary objective of the Monument. Yet there are very few large-scale studies of whether national monuments, parks, and other protected areas are effective in meeting this mandate. Baseline data collected through the front country visitor surveys helps also to look at this issue.

Many rural economies in the West have diversified from being based solely on extractive resource industries (e.g., grazing, timber production, and mining) to include an emphasis on service industries, especially those related to visitor and hospitality services associated with tourism. Successful communities are focusing on developing

services that emphasize open space and remoteness, scenic beauty, outdoor recreation opportunities, and other amenity resources (Drabenstott & Smith, 1995). Amenity resources refer to those aspects of the rural environment in which residents and visitors alike may find beauty, pleasure, and experiences that are unique to that locale. A destination's place uniqueness can be developed and marketed to visiting tourists. Tourism, as a development industry, relies on the development and utilization of natural, historical, cultural, and human resources in the local environment as tourist attractions and destinations. Tourism creates recreational uses for natural and human-made amenity resources and converts these into income producing assets for local residents, thus contributing to the local economy and community development (Willits, Bealer, & Timbers, 1992). Data was also collected through the front country visitor surveys that provide for a limited evaluation of and an analysis of the relationships between visitors and hospitality services provided in the "gateway" communities surrounding the GSENM.

Methodology

Research Questions

The Monument provides an outstanding setting for collecting social science data to help address the research and literature gaps identified previously, and to provide baseline data for evaluating the long-term effectiveness of the zoning strategy contained in the management plan. The following paper describes results from three primary research questions:

1. What are some visitor and use characteristics associated with recreation in dispersed areas in the Front Country and Passage Zones of the Monument?
2. What expectations and preferences do visitors at developed sites in the Front Country Zone have of the management resources and opportunities of the National Monument and visitor hospitality services in the surrounding communities?

3. How much money are visitors to the Front Country and Passage Zones spending in communities located in the Monument area?

Survey and Sampling Design

For Phase I of this study, the survey instruments and sampling design were initially developed in collaboration with Monument staff. During Phase I the survey instruments and the sampling design were pilot tested. From the results of this first year pilot study, the survey instruments and sampling design for Phase II were developed.

Three intercept survey instruments were used in this study: recreation site in the Monument, Monument visitor center, and Scenic Byway 12 overlook surveys. These surveys contained many similar questions, but differed slightly for each type of site. The last two pages of the recreation site survey included questions regarding visitors' expectations, impressions, and activities participated in while at that survey site, while the last two pages of the visitor center survey included questions regarding visitors' impressions of and satisfaction with the facility, displays, and staff at the visitor center survey site. The overlook survey consisted of the same questions asked in the main sections of the recreation site and visitor center surveys. However, a trip route mapping exercise that was included in the other surveys was omitted from the overlook survey due to the amount of time it took to complete in relation to the typical amount of time visitors actually spent at the overlooks.

The main sections of the three intercept surveys contained questions regarding group size, length of stay, residence, overall trip route (mapping exercise), activities participated in, impressions, expectations, and satisfactions while visiting the Monument. The recreation site and visitor center surveys included a mapping exercise where the intent was to attain the most accurate description of the respondent's trip route up to the point when the visitor was surveyed, as well as the visitor's planned trip route following the interview. During this exercise, visitors were asked to point out any sites or visitor centers they had already stopped at, as well as those they were planning to

Monument Recreation Sites				Visitor Centers	Overlooks
<i>Trailheads</i>	<i>Scenic Attractions</i>	<i>Roads</i>	<i>Campgrounds</i>		
Calf Creek	Devil's Garden	Burr Trail	Calf Creek	Big Water	Blues
Deer Creek	Grosvenor Arch	Cottonwood Pull-off	Deer Creek	Boulder	Boynton
Dry Fork	Left Hand Collet	Johnson Canyon Road kiosk	Whitehouse	Cannonville	Head of the Rocks
Escalante River	Paria Movie Set	Smokey Mountain Road kiosk		Escalante	
Harris Wash				Kanab	
Lower Hackberry					
Whitehouse					
Wire Pass					

Table 1. Intercept Survey Sites

stop and where they were planning to go once they left the Monument area.

During the intercept survey data collection effort, 1,751 visitors were asked if they would be willing to participate in a more detailed follow-up mail survey. A mailing list was compiled of all visitors who agreed to participate in the mail survey and provided an address ($n = 1,148$). A three wave mailing design was employed following the outline provided by Dillman (2001). A mail survey accompanied by a cover letter was sent to all visitors on the mailing list as the first wave mailing. Two weeks later, as the second wave mailing, a postcard reminder was sent to all visitors who had not completed and returned the survey sent in the first wave. About one to two weeks following the postcard reminder, another blank survey with an updated cover letter was sent to any remaining visitors who had not yet returned a completed survey.

The mail survey included more detailed questions regarding visitor characteristics, past experience, expectations, satisfactions, Monument images, and expenditures. The survey instrument itself was nine pages long and included a mapping exercise similar to the one used in the intercept survey.

Sampling Process

A two-step sampling design was developed and implemented: a short on-site intercept survey, and a more detailed mail survey. Data were gathered from visitors from late March through mid October in 2004, using a random systematic selection of dates. Intercept surveys were conducted at 27 pre-determined sites within the Front Country and Passage Zones of the GSENM. Surveys were conducted at five visitor centers and three overlooks adjacent to the Monument, and 19 recreation sites (trailheads, scenic attractions, roads, and campgrounds) located directly on the GSENM. A breakdown of sample sites by each the type of location and a complete list of contact points are shown on Table 1. Visitors to the three campgrounds (Calf Creek, Deer Creek, Whitehouse) were sampled during the same time block as the respective trailheads at these locations. Visitors were approached by researchers after completing activities at each site, while campers were approached at their campsites. Researchers conducted intercept surveys in an interview style with those visitors who agreed to participate in the study.

		Monument Recreation Sites				Visitor Centers	Overlooks	Total
		<i>Trailheads</i>	<i>Scenic Attractions</i>	<i>Roads</i>	<i>Camp-grounds</i>			
Days in Sampling Period	<i>Weekend</i>	25	14	19	9	30	15	45
	<i>Weekday</i>	56	35	42	25	63	38	96
Number of Contacts		272	213	84	28	724	985	2,306
Completed Intercept Surveys	<i>Weekend</i>	103	66	28	17	230	264	708
	<i>Weekday</i>	157	139	53	10	371	623	1,353
	<i>Total</i>	260	205	81	27	602 ¹	887	2,062
Intercept Response Rate		95.6%	96.2%	96.4%	96.4%	83.1%	90.1%	89.4%
Number of Addresses		193 (74.2%)	149 (72.7%)	61 (75.3%)	22 (81.5%)	395 (65.6%)	328 (56.9%) ²	1,148 ³ (65.6%)
Mail Surveys Returned		132	99	40	13	263	219	766
Mail Survey Response Rate		68.4%	66.4%	65.6%	59.1%	66.6%	66.8%	66.7%

Table 2. Sampling Days and Intercept and Mail Survey Response Rates

¹One survey was missing the date it was completed

²Of the 887 overlook respondents, 311 were not asked if they would like to do a mail survey

³Of the 2,306 visitors contacted, 555 (24.1%) were not asked to participate in the mail survey because they refused the intercept survey (n=244; 10.6%) or were overlook visitors who indicated that they were just passing through or going to work (n=311; 13.5%). Of the 1,751 who were asked if they would do a mail survey, 581 (33.2%) said no and 1,170 (66.8%) said yes. Of those who said yes, 22 (1.9%) gave invalid addresses (undeliverable).

Results

Survey Response

As shown in Table 1, there were 27 locations where the intercept surveys were administered. Of the 2,306 respondents contacted, 2,062 (89.4%) agreed to be interviewed (Table 2). This included 83% (n = 602) at visitor centers, 90% (n = 887) at overlooks, and 96% (n = 573) at recreation sites.

Of the 2,062 respondents who agreed to the intercept interview, 1,751 (84.9%) were asked if they would be willing to receive and complete the follow-up mail-back survey. Overall, 555 respondents were not asked if they would be willing to participate in the mail survey because they refused to participate in the intercept survey (n = 244) or they were overlook visitors who told the interviewer that they were just passing through or commuting to work (n = 311), allowing the visitor to skip the section asking for mailing information

and participation in the mail survey. Of the 1,170 (66.8%) respondents who said they would be willing to complete a mail survey (581 refused), 1,148 gave the interviewer their name and a useable mailing address. Of those, 766 respondents completed and returned the survey for a response rate of 67.6% (Table 2).

Demographics

Of the 2,062 visitors who participated in the intercept survey, about 67% (n = 1,382) were males. The average age of all survey participants was 50 years. Visitors to the Monument came from throughout the United States and the world. International visitors comprised about 23% (n = 471) of the sample, and of this, 38.2% were from Germany (n = 180), 12.7% from the Netherlands (n = 60), and 9.1% from Canada (n = 43).

Of the 2,050 respondents who indicated their place of residence, 14.2% (n = 290) of the intercept visitors were from Utah, 12.9% (n = 265)

from California, 5.8% (n = 118) from Arizona, 4.9% (n = 100) from Colorado, and 9.5% (n = 194) from other western states (Nevada, Montana, New Mexico, Oregon, Idaho, Washington, Wyoming, and Alaska). The rest of the visitors were from 39 other states (n = 607; 29.6%). All together, the sample included visitors from all 50 states and the District of Columbia. Of those visitors who were from Utah, 10.3% (n = 30) resided within either Kane or Garfield counties and would be considered local residents to the Monument area. The top three Utah counties represented were Salt Lake (n = 95; 32.8%), Utah (n = 35; 12.1%), and Washington (n = 33; 11.4%). Those three counties contain 60.8% of the state's population and accounts for 56.3% of in-state visitors while Garfield and Kane counties have only 0.5% of the state's population and accounts for 10.3% of Front Country visitors.

When visitors were asked how many people were in their group for the trip, 12.6% (n = 223) said they were alone, 56.3% (n = 996) indicated a group size of two, 20.7% (n = 366) said three or four, 6.2% (n = 109) indicated five or six, and 4.2% (n = 75) said seven or more. Following a

similar pattern, when asked how many people were traveling in the same vehicle as the respondent, the majority (n = 1,018; 57.6%) of respondents said that there was a total of two people traveling in the same vehicle.

Respondents were also asked if this was the first time they had visited the Monument. Slightly more than sixty percent (60.6%; n = 1,062) indicated they were first time visitors. When first time visitors were asked what they expected to see and experience during their visit to the Monument area, 572 (54.5%) gave a response concerning natural features, 463 (44.1%) said landscape and scenery, and 151 (14.4%) had no expectations or did not expect anything (respondents were given the opportunity to provide multiple answers).

Knowledge of the Monument's Management Agency

Visitors were asked if they had heard of the Grand Staircase-Escalante National Monument and 88.0% (n = 1,814) said they had heard of it (Table 3). Of those 1,814, 1,806 were then asked if

		<i>Overall</i>	<i>Utah</i>	<i>Other States</i>	<i>International</i>
Heard of GSENM?	Yes	88.0%	97.9%	90.9%	73.8%
	No/Unsure	12.0%	2.1%	9.1%	26.2%
If yes, do you know which agency manages GSENM?	Yes	58.7%	71.6%	62.7%	35.1%
	No/Unsure	41.3%	28.4%	37.3%	64.9%
Bureau of Land Management (BLM) ¹		74.3%	82.4%	73.8%	64.5%
National Park Service (NPS)		11.8%	5.9%	12.3%	19.0%
Department of the Interior		3.4%	2.0%	3.8%	1.7%
U.S. Government		2.5%	2.5%	2.6%	2.5%
Forest Service		1.9%	3.4%	1.8%	0.0%
State Parks		1.5%	0.5%	1.0%	6.6%
Other Agencies or Combined Agencies		4.6%	3.3%	4.7%	5.7%

Table 3. Knowledge of the GSENM's Management Agency

¹38.2% (788 out of 2,062) of respondents had heard of GSENM, indicated they knew which agency managed it, and correctly identified the BLM as the management agency.

they knew the agency that manages the Monument and 58.7% ($n = 1,061$) said yes (eight responses were not recorded). When those 1,061 visitors were asked to identify the agency, 74.3% ($n = 788$) correctly identified the BLM. In other words, only 788 (38.2%) of the 2,062 respondents had heard of the Monument and indicated they knew which agency managed it and correctly identified the BLM as the management agency (Table 3). Noteworthy is that about one-quarter of the international visitors (26.2%) indicated they had not heard of the GSENM or were unsure if they had heard of it. Also noteworthy is that almost 65% of international visitors did not know which agency was responsible for the management of the Monument, while over one-third (37.3%) of the visitors from other states didn't know, and over one-fifth (28.4%) of Utahns didn't know.

Monument and Trip Information Sources

Visitors who had heard of the Monument were asked how they first found out about the Monument. As shown in Table 4, the most frequently mentioned information source for first hearing about the Monument were reports about the initial designation by President Clinton's proclamation in 1996 (20.6%), followed by maps and brochures (16.2%), guidebooks (13.5%), and friends or family (11.5%). However, 15.4% ($n = 272$) of the

visitors gave a response other than the response categories listed on the survey. The other sources of information where visitors first heard about the Monument are organized into several general categories: clubs ($n = 4$; 1.5%), community ($n = 21$; 7.7%), do not know ($n = 18$; 6.6%), educational sources ($n = 15$; 5.5%), familiar with the area ($n = 35$; 12.9%), media sources ($n = 51$; 18.8%), miscellaneous answers ($n = 6$; 2.2%), Monument designation ($n = 10$; 3.7%), personnel in surrounding areas ($n = 7$; 2.6%), planning for the trip ($n = 6$; 2.2%), travel agency/information center ($n = 20$; 7.4%), travel literature/literature about the area ($n = 24$) 8.8%, and traveling ($n = 67$; 24.6%).

Interestingly, but perhaps not surprising, over half of the Utahns (52.3%) indicated they first found out about the Monument through the media blitz surrounding the original Clinton designation, compared to 17.5% of visitors from other states and only 4.2% from other countries (Table 4). Maps and brochures were not used much as the initial information source by Utahns (3.6%) compared to visitors from other states (18.4%) and countries (19.3%). Similarly, less than one percent of Utahns first found out about the Monument from internet sources compared to 7.3% from other states and 10.9% from other countries. More than one-third of international visitors (35.3%) used a guidebook compared to less than one percent of Utahns. Also, Utahns were more likely to have first heard of the Monument from friends

Information Source	Overall ($n=1,761$)	Utah ($n=279$)	Other States ($n=1,141$)	International ($n=331$)
Clinton Designation	20.6%	52.3%	17.5%	4.2%
Maps/Brochures	16.2%	3.6%	18.4%	19.3%
Guidebook	13.5%	0.4%	10.3%	35.3%
Friends/Family	11.5%	15.8%	12.0%	6.3%
Internet	6.9%	0.7%	7.3%	10.9%
Driving By/Road Signs	6.9%	5.0%	7.7%	5.7%
Magazine	4.0%	0.7%	4.9%	3.9%
Newspaper	2.9%	5.0%	2.6%	2.1%
Visitor Center	2.2%	0.0%	2.7%	2.1%
Other	15.4%	16.5%	16.5%	10.0%

Table 4. Information sources used to first find out about the Monument (respondents checked only one information source).

and family (15.8%) than visitors from other states (12.0%) and international visitors (6.3%).

When respondents were asked what sources of information they had used to plan their *current* Monument trip, the largest percentage of responses were in the maps/brochures (29.1%) and guidebook (29.1%) categories (Table 5). Almost one quarter received information at a visitor center, while 23.1% utilized the internet. Other frequently mentioned sources were knowledge based on previous trips (16.3%), friends and family (12.5%) and driving by or road signs (7.4%). For this question, visitors were allowed to give more than one response as to what sources of information they had utilized. Again, for this question, visitors were allowed to give answers other than those provided on the survey and these responses ($n = 325$) were organized into several general categories: clubs ($n = 3$; .9%), community ($n = 44$; 13.5%); do not have any information ($n = 38$; 11.7%), educational sources ($n = 12$; 3.7%), familiar with the area ($n = 28$; 8.6%), media sources ($n = 23$; 7.1%), personnel in surrounding areas ($n = 14$; 4.3%), travel agency/information center ($n = 80$; 24.6%), travel literature/literature about the area ($n = 40$; 12.3%), and traveling ($n = 46$; 14.2%).

In planning for their trip, Utahns were more likely to find previous trip experience to the area more useful (33.5%) than visitors from other states (14.6%) and countries (7.9%) (Table 5). Also, word-of-mouth information from friends and family was an important source of information for Utahns (22.5%) compared to those living in other states (11.2%) and countries (7.9%). More than half of international visitors (50.9%) used guidebooks compared to about one-quarter of visitors from other states and 13.7% of Utahns. Similarly, international visitors (30.2%) and visitors from other states (24.0%) used internet sources for trip planning compared to only 10.6% of Utahns. Maps and brochures also appear to be important trip planning aids for all visitors.

In comparing first time visitors to repeat visitors to the Monument, there are differences evident in the sources of information where the visitor *first* found out about the Monument. First time visitors were more likely to say maps/brochures ($n = 174$; 19.8%) or guidebooks ($n = 165$; 18.8%), while repeat visitors were more likely to say the Clinton designation ($n = 239$; 37.2%) or friends/family ($n = 72$; 11.2%) (Table 6).

Information Source	Overall ($n=1,803$)	Utah ($n=284$)	Other States ($n=1,166$)	International ($n=342$)
Maps/Brochures	29.1%	17.6%	32.4%	26.6%
Guidebook	29.1%	13.7%	26.5%	50.9%
Visitor Center	23.8%	22.2%	24.9%	21.6%
Internet	23.1%	10.6%	24.0%	30.2%
Previous Trip Experience	16.3%	33.5%	14.6%	7.9%
Friends/Family	12.5%	22.5%	11.2%	7.9%
Driving By/Road Signs	7.4%	9.2%	8.1%	3.8%
Magazine	4.5%	1.1%	6.1%	1.8%
Government Agency Office	2.6%	3.9%	2.5%	1.8%
Newspaper	1.4%	1.4%	1.6%	0.6%
Other	18.0%	18.0%	19.8%	12.3%

Table 5. Where did you get information about the Monument to plan this particular trip? (Respondents could select more than one information source).

	First Time Visitors (n=878)		Repeat Visitors (n=643)	
	percent	n	percent	n
Friends/Family	12.8%	112	11.2%	72
Driving By/Road Signs	4.8%	42	9.5%	61
Maps/Brochures	19.8%	174	8.1%	52
Magazine	5.2%	46	2.5%	16
Newspaper	1.8%	16	4.4%	28
Guidebook	18.8%	165	5.3%	34
Internet	8.8%	77	2.8%	18
Visitor Center	2.8%	25	1.1%	7
Clinton Designation	11.2%	98	37.2%	239
Other	14.0%	123	18.0%	116

Table 6. Comparison of first time and repeat visitors first finding out about the Monument.

When comparing first time visitors with repeat visitors to the Monument, first time visitors were more likely to use guidebooks ($n = 299$; 33.3%), maps/brochures ($n = 283$; 31.5%), visitor centers ($n = 254$; 28.3%), and the internet ($n = 220$; 24.5%) when they *planned* their trip, while repeat visitors were more likely to rely on information from a previous trip/experience ($n = 237$; 35.8%), maps/brochures ($n = 162$; 24.5%), guidebooks ($n = 161$; 24.3%), and visitor centers ($n = 150$; 22.7%) (Table 7).

Visitation

Visitors were asked how long they were planning to stay in the Monument area. Of the 1,727 who answered this question, 87.6% ($n = 1,513$) were staying one day or more while the rest were only visiting from one to twelve hours. Of those staying one day or more, 29.1% indicated they were only staying one day, 20.7% indicated they were staying two days, 32.1% said three, four, or five days, 18.1% indicated they were staying 6 or more days. Visitors who indicated they were staying one day or longer, on average, stayed 3.6 days visiting the Monument. Of the 214 visitors who said that they were visiting the Monument for less than one day, 74.8% indicated they were staying for four hours or less, with the other 25.2% staying 5 to 12 hours. The average amount of hours these visitors visited the Monument was 3.4 hours.

Visitors were also asked why they were visiting the Monument area. Recreation was the primary reason by far with 77.2% ($n = 1,566$) of visitors providing this response. However, 57.1% ($n = 1,158$) of the visitors responded they were visiting for recreation but that the Monument was not their primary destination; and 20.1% ($n = 408$) responded they were visiting for recreation and the Monument was their main destination (Table 8).

The 1,158 visitors who said the Monument was not their main destination were asked what their main destination was. The most frequently mentioned response for this question was a tour of the National Parks ($n = 370$; 32.0%). Interestingly, 87 (7.5%) of the visitors responded they had no real main destination or were just traveling. The next most frequently mentioned responses were Bryce Canyon National Park ($n = 70$; 6.0%), southern Utah ($n = 63$; 5.4%), both Bryce Canyon and Zion National Parks ($n = 43$; 3.7%), a tour of the Southwest ($n = 37$; 3.2%), Grand Canyon National Park ($n = 28$; 2.4%), a tour of the West ($n = 27$; 2.3%), Capitol Reef National Park ($n = 22$; 1.9%), both Bryce Canyon and Capitol Reef National Parks ($n = 17$; 1.5%), Lake Powell ($n = 14$; 1.2%), and Las Vegas, NV ($n = 14$; 1.2%).

	First Time Visitors (n = 899)		Repeat Visitors (n = 662)	
	percent	n	percent	n
Friends/Family	13.1%	118	13.0%	86
Driving By/Road Signs	7.0%	63	8.9%	59
Maps/Brochures	31.5%	283	24.5%	162
Magazine	5.9%	53	3.2%	21
Newspaper	1.7%	15	1.5%	10
Guidebook	33.3%	299	24.3%	161
Internet	24.5%	220	20.4%	135
Visitor Center	28.3%	254	22.7%	150
Government Agency Office/Personnel	2.7%	24	3.5%	23
Previous Trip/Experience	3.0%	27	35.8%	237
Other	18.7%	168	16.9%	112

Table 7. Comparison of first time and repeat visitors on information sources for current trip.

Importance-Performance Analysis

The purpose of Importance-Performance (I-P) analysis is to have visitors rank various aspects of their trip for 1) the importance each aspect is for a satisfying recreational experience, and 2) their actual satisfaction with each aspect (perception of performance). We included two broad sets of questions on the mail survey instrument: 24 items related to Monument management, and 14 items related to other visitor facilities and services in local communities and on other public lands.

Questions dealing with the importance of items related to the overall quality of visitors' recreation experience asked respondents, "How important to you are each of the following items when visiting the Monument?" Responses to this question were on a scale where: 1="Not Important," 2="Somewhat Important," 3="Important," 4="Quite Important," and 5="Very Important." Questions dealing with the overall quality of visitors' recreation experience asked respondents, "please rate how satisfied you were with the following items during your actual visit to the Monument." Responses to this question were on a scale where: 1="Not Satisfied," 2="Somewhat Satisfied," 3="Satisfied," 4="Quite Satisfied," and 5="Very Satisfied." This question also contained a

"N/A" check box for respondents who had not had experience with a particular item during their trip.

Questions dealing with the importance of services asked respondents, "How important to you are each of the following services when visiting the Monument area?" Responses to this question were on the same importance scale mentioned above. Questions dealing with visitor satisfaction with services asked respondents, "please rate how satisfied you were with the following services during your actual visit to the Monument area." Responses were scored on the same satisfaction scale as the Monument recreation quality questions referred to in the previous paragraph.

Importance-Performance Analysis Summary

Below are summary I-P diagrams of the importance and satisfaction mean score ratings for all Monument management (Figure 2) and other local services and community services (Figure 3) items. The dotted lines represent the grand means for the importance (horizontal) ratings for all respondents, and satisfaction (vertical) ratings for respondents that had experience with the items in that figure. Thus, the means are just a guideline to help visually illustrate the differences between all the items on both scales simultaneously.

	<i>Overall</i>	<i>Survey Type</i>		
		<i>Recreation Sites (n = 568)</i>	<i>Visitor Centers (n = 591)</i>	<i>Overlooks (n = 870)</i>
Primarily for recreation - the Monument is my main destination	20.1%	37.9%	21.8%	7.4%
Primarily for recreation - but my main destination is NOT the Monument	57.1%	56.0%	65.0%	52.4%
Primarily for business, family, or other reason; the Monument was a side trip	2.4%	3.3%	3.7%	0.8%
Working or commuting to work (overlook only)	0.1%	0.0%	0.2%	0.1%
Just passing through (overlook only)	15.2%	0.0%	0.0%	35.4%
Other	5.2%	2.8%	9.3%	3.9%

Table 8. Reasons for visiting the Monument

In the simplest interpretation of the I-P diagrams, each quadrant represents a different management implication. Items in the lower right quadrant are generally the highest because they are relatively high on the importance scale and low on the satisfaction scale, that is, management should “concentrate efforts here” (Figure 1). Items in the upper right are those that have relatively high importance and satisfaction scores (“keep up the good work”), those in the upper left are below the mean in importance but above the satisfaction mean (“possible overkill”), and those in the lower left are low on both scales (“low priority”). These interpretations are oversimplified however, as the following summary explains.

Importance-Performance, Monument Management

The I-P questions related to Monument management included 24 items in six categories: signage, naturalness, services, infrastructure, education, and information. Note especially five items in the upper right quadrant, “keep up the good work” (Figure 2): Brochures and Maps (A), Helpfulness of Monument Employees (W), Cleanliness

of Restroom Facilities (V), Conditions of Monument Trails (Q), and Safety Information (X) that have high levels of importance and satisfaction. There are three items in the “concentrate efforts here” quadrant: Monument Trailhead Markers (P), Directional Signs to Monument Destinations (O), and Wildlife related information (K). In addition to these, a more detailed analysis suggests several other areas that need management attention. For example, item J was rated low on importance and satisfaction, which would suggest that, from a visitor standpoint, paleontology is not important nor done well. Given the importance of paleontology in the Monument Proclamation and science program, however, a lack of interest on the part of the public does not mean it should be downplayed by management, and if anything, it also suggests much more attention needs to be put on paleontology education in the future. It is also possible that the word “paleontology” was unfamiliar to some visitors, and that may have been reflected in relatively low importance rankings than if the survey had said “dinosaurs and other topics of pre-history.”

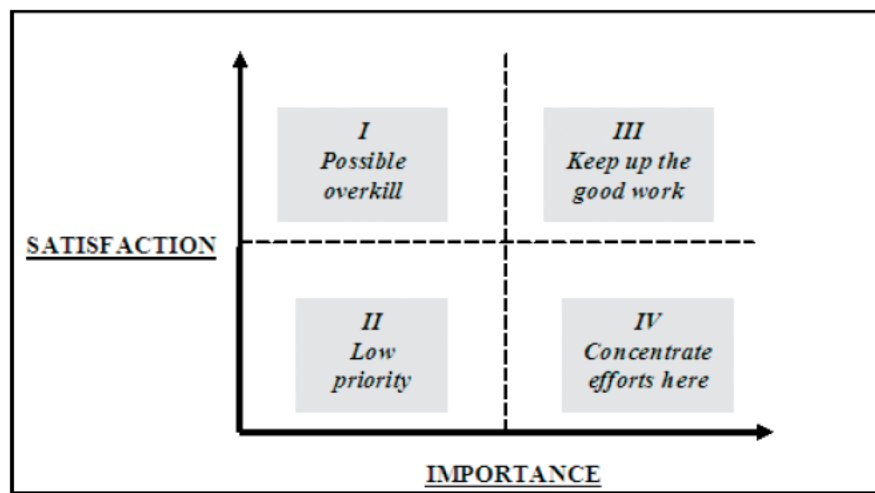


Figure 1. Importance/Satisfaction Model

There is also a relatively large cluster of items near the axis of the scale means. Many of these items are also related to natural history and signage. For example G, H, I, and L are natural history topics (history, geology, archeology, and plants), and N is about signs (Directional Signs to Visitor Centers), F is about History of the Monument Area, and D is about Information about Recreation Opportunities. Thus the I-P results suggest improvements are needed most in the areas of signage, education/interpretation, and information. Changes related to the educational needs, such as new visitor centers and environmental education programs, were being developed or were newly implemented at the time of the survey, but the I-P results also suggest that better trailhead and destination information signs should also be a priority for the future. The results of this analysis should be used to evaluate the effectiveness of these management related changes in the future. It should also be noted these I-P results represent a “macro” approach, representing visitors’ perceptions of importance and satisfaction with general, overall management items, and not site-specific items.

Importance-Performance, Other Community and Local Services

Unlike the results for the Monument management items, there is a fairly linear relationship between the importance and satisfaction scores for the 14 community service items (Figure 3). That is, as importance levels increase, satisfaction tends to increase as well. And while dissatisfaction

seems to be quite low for visitors who actually used various types of services (none of the items had more than 10% of those who used the services and said they were important and also said they were only “Somewhat Satisfied” or “Not Satisfied”), satisfaction was also not very high for many services other than State, USFS, and NPS Campgrounds (C), Lodging Services (A), and Monument Visitor Information Services (N) in the upper right quadrant. Conversely, Eating and Drinking Establishments (E), Grocery and Convenience Stores (F), and Emergency Medical Services (L) seem to need the most attention, based on their relatively high importance and low satisfaction scores.

Unlike the Monument management items, there are a relatively high number of items in the “low priority” category (lower left quadrant), including Privately Owned Campgrounds (D), Sporting Goods and Outdoor Equipment Stores (H), Souvenir Stores, Gift Shops, and Galleries (I), and Guide and Outfitting Services (J). While this partially reflects the fact that relatively few people need or use these services, these findings, especially the relatively low satisfaction ratings, are important for local economic development in the communities. The results could reflect the relative newness of the Monument and the lack of experience of these businesses serving the number and diversity of visitors attracted by the new Monument. While national and state parks have traditionally attracted tourists to the area, the effect of the new Monument may be to hold and disperse

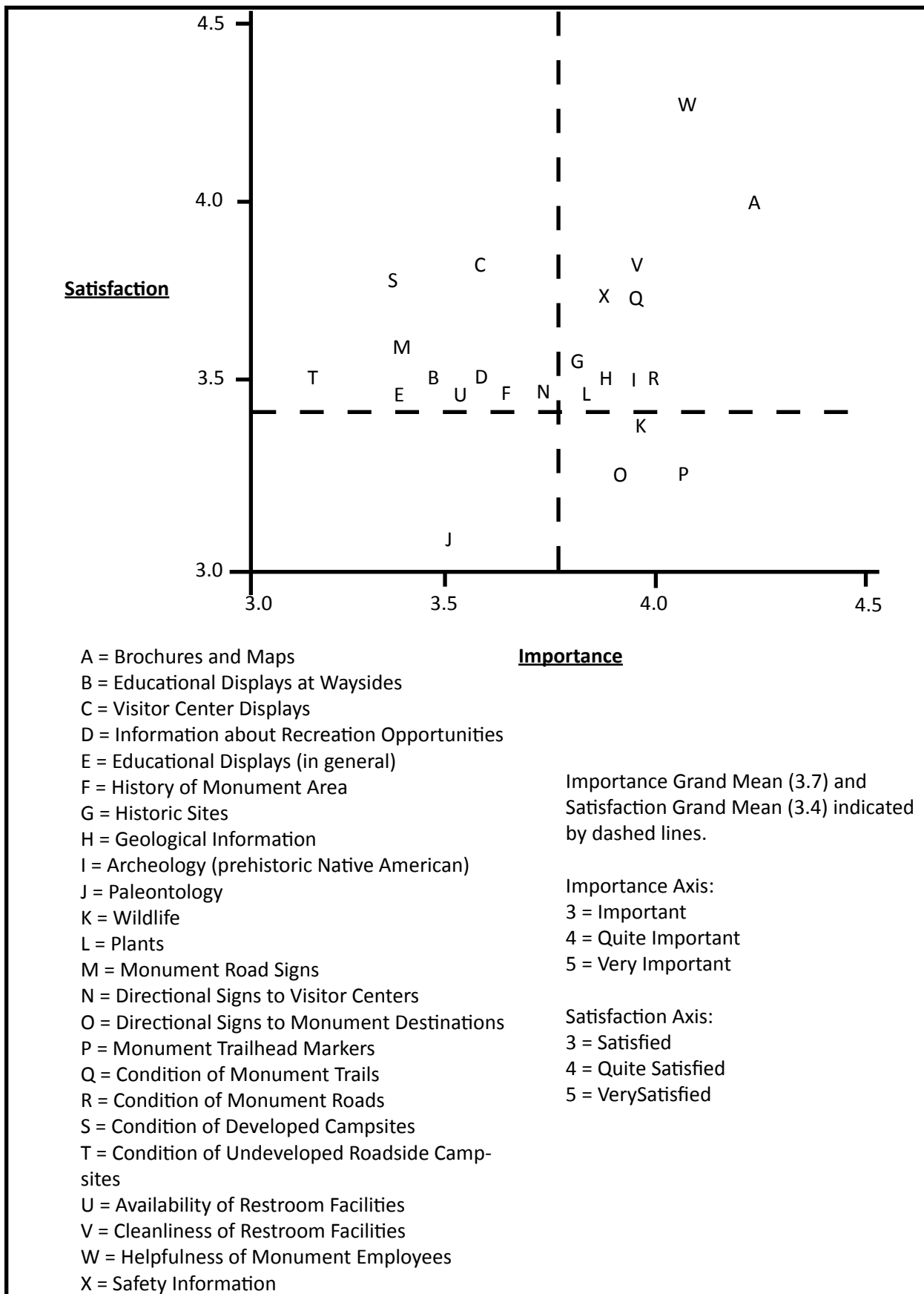


Figure 2. I-P Monument Management Summary Diagram

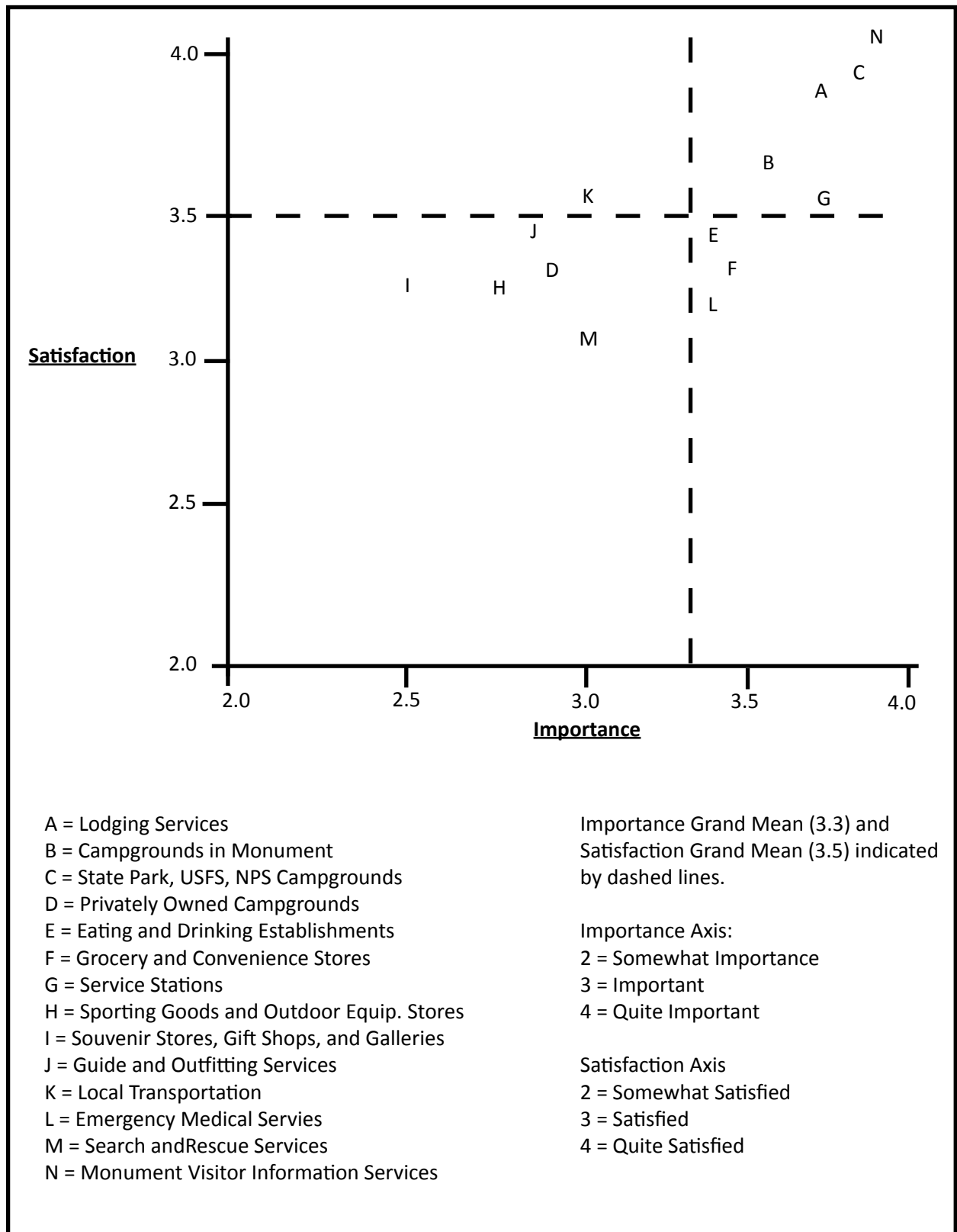


Figure 3. I-P Community and Other Local Services Summary Diagram

visitors for longer periods in more communities having less experience with visitors than in the past. So for example, rather than most visitors to Bryce Canyon National Park staying in the national park campgrounds or Ruby's Inn, now visitors are also stopping at Monument sites and staying in Boulder, Escalante, Cannonville, Tropic, and other towns that had little overflow business before. This interpretation is also supported by the items located in the upper right quadrant, which identifies successful service items – Agency Operated Campgrounds (B and C), Service Stations (G), and Lodging Services (A) – all services that would be expected to have had more experience with past tourism, the pass-through type tourist, and more traditional types of visitors, compared to sporting goods stores, outfitters, and souvenir shops in many of the small towns in the region.

Finally, the last item in the lower left quadrant “Search and Rescue Services” (M), is difficult to interpret. Very few respondents, if any, would have had experience with search and rescue services, yet there were as many who said they used this service (n=63) as said they used “Emergency Medical Services” (L) (n=74). It is possible many of these are the same respondents to both items, and that some do not understand the difference between these two services – search and rescue operations are not offered in many parts of the U.S. and other countries. Regardless of the accuracy of response to this question, however, it is still a concern that visitors rated medical services relatively low, and Monument staff and local community officials should investigate these potential concerns.

Visitor Expenditures and Economic Impact in the Monument Area

On the mail survey, respondents were asked to indicate their group's total monetary expenditure in the Monument area and surrounding communities for the trip in which they filled out the intercept survey. Eleven visitor service categories were listed (along with an “Other expenditures” category) and respondents were asked to list a dollar amount next for each. Of the 766 who returned the mail survey, 735 (95.9%) answered this question.

Following are two primary sets of analysis: 1) expenditures by respondents' location of residence, and 2) an IMPLAN analysis that demonstrates the broader contribution of these expenditures to the economy and employment of Garfield and Kane Counties.

Expenditures by Respondents' Location of Residence

As shown on Table 9, total average amount spent per group in the Monument area was just under \$500. Average international group expenditures (\$614.90) were almost \$260 more than Monument visitors from Utah (\$356.14) and about \$115 more than visitors from other states (\$500.43). When comparing average amount spent by Utahns with visitors from other states and countries, some interesting patterns begin to emerge. Groups from other states spent about twice as much on lodging compared to Utahns, and international visitors spent nearly three times more than Utahns. Domestic visitors (including Utahns) spent more on privately owned campgrounds than international visitors. Utahns spent less on average for restaurant meals (\$75.25) than visitors from other countries (\$135.29) and other states (\$108.57). There is a similar pattern in purchases from grocery and convenience stores with Utahns spending about \$38 compared to internationals at \$68 and those from other states at about \$45. However, Utahns spent about \$15 more for fuel than those in the other two groups. Visitors from other states spent more on souvenir and gift shop purchases (\$42.05) than Utahns (\$15.45) and international visitors (\$29.00).

The summary statistics presented in Table 10 also show some interesting contrasts. Visitors to the Monument who reside in Utah tended to spend less on their trip (both median and mean values) than their counterparts in other states and countries. Of the 766 who returned the mail survey, 31 (4.0%) did not answer any expenditure questions, so they were eliminated from the data set, thus resulting in a sample size of 735. The total amount of money spent in the Monument area by our 735 respondents was \$363,538. Utahns made up 14.6% of the respondents and contributed 10.6% to the total expenditures whereas international visitors

<i>Expenditure Categories</i>	<i>Overall (n = 735)</i>	<i>Utah (n = 108)</i>	<i>U.S.A (n = 528)</i>	<i>International (n = 99)</i>
Lodging Services	\$164.29	\$83.21	\$167.33	\$236.52
Campgrounds in Monument	\$3.85	\$3.79	\$3.77	\$4.36
State Park USFS/NPS Campgrounds	\$13.37	\$14.56	\$13.39	\$12.01
Privately Owned Campgrounds	\$8.65	\$6.48	\$10.21	\$2.73
Eating and Drinking Establishments	\$107.28	\$75.25	\$108.57	\$135.29
Grocery and Convenience Stores	\$47.16	\$38.18	\$45.01	\$68.40
Service Stations (Fuel)	\$65.42	\$78.64	\$63.04	\$63.64
Sporting Goods/Outdoor Equipment	\$10.13	\$9.17	\$9.37	\$15.29
Souvenir, Gift Shops, Galleries	\$36.39	\$15.45	\$42.05	\$29.00
Guide and Outfitting Services	\$19.96	\$11.57	\$19.20	\$33.13
Local Transportation	\$0.65	\$1.39	\$0.54	\$0.45
Other	\$17.64	\$18.63	\$18.11	\$14.07
Total Average Expenditures	\$494.65	\$356.14	\$500.43	\$614.90

Table 9. Average amount of money spent per group in Monument and surrounding area.

	<i>Overall</i>	<i>Utah</i>	<i>Other U.S.</i>	<i>International</i>
Median	\$324.00	\$212.50	\$347.50	\$324.00
Mean	\$494.65	\$356.14	\$500.43	\$614.90
Standard Deviation	\$597.20	\$455.41	\$571.57	\$804.51
Sum (percent of overall)	\$363,565.00 (100%)	\$38,463.00 (10.6%)	\$264,227.00 (72.2%)	\$60,875.00 (16.7%)
Respondents (percent of overall)	735 (100%)	108 (14.6%)	528 (71.8%)	99 (13.4%)
Individuals (percent of overall)	2,079 (100%)	514 (24.7%)	1,318 (63.4%)	247 (11.9%)

Table 10. summary statistics of group expenditures in Monument area.

made up 13.4% of the respondents and contributed 16.7% to the total expenditures. However a more marked discrepancy occurs when examining number of individuals that were in the respondents' groups. Respondents from Utah reported the expenditures were for larger size groups (mean = 4.8, median = 3.0) than those from out of state (mean = 2.5, median = 2.0 for both other states and international visitors). Thus, the 735 respondents gave expenditure information for 2,079 individuals (Table 10, bottom row). Expenditures for individuals traveling with the Utah respondents accounted for 24.7% of all individuals and contributed 10.6% to the total amount spent compared to 16.7%

contributed by international visitors and 72.2% by out-of-state American visitors.

It is important to point out that most respondents made purchases in several service sectors and very few (if any) spent money in all sectors. As shown in the last row on Table 11, 4.2% (n=31) indicated they did not spend any money in the Monument area during that trip. An interesting finding, but not necessarily surprising is that about two-thirds of visitors from other states and countries spent money on lodging services compared to 38.5% of Utahns. Visitors from other states were more likely to stay in privately owned camp-

<i>Expenditure Categories</i>	<i>Overall (n = 735)</i>		<i>Utah (n = 109)</i>		<i>U.S.A (n = 527)</i>		<i>International</i>	
	\$0	>\$0	\$0	>\$0	\$0	>\$0	\$0	>\$0
Lodging Services	40.7	59.3	61.5	38.5	38.3	61.7	30.3	69.7
Campgrounds in Monument	89.0	11.0	89.0	11.0	89.0	11.0	88.9	11.1
State Park/USFS/NPS Campgrounds	72.2	27.8	73.4	26.6	71.9	28.1	72.7	27.3
Privately Owned Campgrounds	90.5	9.5	95.0	5.0	88.6	11.4	94.9	5.1
Eating and Drinking Establishments	17.8	82.2	22.0	78.0	16.9	83.1	18.2	81.8
Grocery and Convenience Stores	24.2	75.8	21.0	79.1	24.7	75.3	25.3	74.7
Service Stations (Fuel)	12.1	87.9	9.2	90.8	12.2	87.8	15.2	84.8
Sporting Goods/Outdoor Equipment	83.3	16.7	84.4	15.6	83.9	16.1	78.8	21.2
Souvenirs, Gift Shops, Galleries	52.0	48.0	67.9	32.1	49.0	51.0	50.5	49.5
Guide and Outfitting Services	92.9	7.1	95.4	4.6	92.6	7.4	91.9	8.1
Local Transportation	98.5	1.5	99.1	0.9	98.3	1.7	99.0	1.0
Other	86.8	13.2	87.0	13.0	86.9	13.1	85.9	14.1
All Categories	4.2	--	2.8	--	4.2	--	6.1	--

Table 11. Percent of respondents who did not spend money in Monument area compared with those who spent some amount.

grounds (11.4%) than Utahns and international visitors (about 5% each). The percent of visitors who spent money in restaurants and grocery stores was about the same for Utahns, international, and domestic visitors (about 75% or higher). However, while about half of the international and domestic visitors made purchases in souvenir or gift shops, less than one-third of Utahns made similar purchases (Table 11).

In order to get a more realistic estimate of average expenditures for each category, mean and median values were calculated without including respondents who indicated they did not spend any amount in the different service sectors. As shown in Table 12, of the 436 (59.3%) respondents who spent money on lodging services, the average amount spent was \$277. Average expenditures for privately owned campgrounds (\$91) were about \$40 to \$55 more than the amount spent on public campgrounds. About three-quarters of the respondents spent an average of about \$131 to eat out in restaurants for a total of almost \$79,000. For those who contracted with local guide and outfitting companies (7.1%), the average was \$282 with a median value of \$100 and a total amount spent

of \$14,668. The largest amount of money spent in the Monument area by visitors was for lodging (\$120,753), followed by meals in restaurants (\$78,848), fuel at service stations (\$48,016), items purchased in grocery and convenience stores (\$34,660), purchases at souvenir and gift shops (\$26,743), and guide services (\$14,668).

Input-Output Economic Analysis (IMPLAN)

This research was not designed to measure economic impacts of visitors to the area on local or state economies. The expenditure items, described above, were intended to provide insight into what items are purchased in local businesses by Monument visitors. However, by inputting the data into an economic analysis model, the resulting output can help further the understanding of economic relationships between tourism spending and local economic viability.

The impact that a recreation activity has on an economy is different than total amount spent pursuing that activity. A dollar spent at point of purchase moves through the economy and affects

<i>Expenditure Categories</i>	<i>Mean</i>	<i>Median</i>	<i>Range</i>		<i>Respondents</i>		<i>Sum</i>
			<i>Low</i>	<i>High</i>	<i>% of 735</i>	<i>n</i>	
Lodging services	\$277	\$185	\$10	\$3,000	59.3%	436	\$120,753
Campgrounds in Monument	\$35	\$16	\$4	\$200	11.0%	81	\$2,827
State Park USFS/NPS Campgrounds	\$48	\$21	\$2	\$800	27.8%	204	\$9,819
Privately Owned Campgrounds	\$91	\$60	\$4	\$500	9.5%	70	\$6,359
Eating and Drinking Establishments	\$131	\$80	\$3	\$2,000	82.2%	604	\$78,848
Grocery and Convenience Stores	\$62	\$40	\$2	\$1,500	75.8%	557	\$34,660
Service Stations (Fuel)	\$74	\$50	\$10	\$750	87.9%	645	\$48,016
Sporting Goods/ Outdoor Equipment	\$61	\$40	\$1	\$800	16.7%	123	\$7,449
Souvenir, Gift Shops, Galleries	\$76	\$50	\$2	\$1,200	48.0%	353	\$26,743
Guide and Outfitting Services	\$282	\$100	\$5	\$3,000	7.1%	52	\$14,668
Local Transportation	\$44	\$30	\$10	\$150	1.5%	11	\$479
Other	\$133	\$50	\$3	\$1,000	13.2%	97	\$12,49
All Expenditures	\$516	\$340	\$4	\$6,000	95.8%	704	\$363,565

Table 12. Mean, median, and total expenditures for groups who spent money.

employment and income beyond area of purchase. Estimating impacts that tourist expenditures have on local counties helps inform those involved with formulating policy as to potential consequences of their decisions.

An Input-Output (I-O) analysis model was used to assess the economic impact on Garfield and Kane Counties for visitors who indicated that the Monument was their main destination. The computer model “Impact Analysis for Planning” (IMPLAN) was used as the analytical tool. That model is used for either analytical or predictive estimates for economic impacts and has been previously utilized to conduct economic impact analysis of recreation (McCoy et al., 2001).

When forecasting economic impacts using a predictive model, it is important to define whose

expenditures are included, why those expenditures are more important than others, and purchase location. It is obvious there are a variety of motivations for Monument area visitation, from taking the wrong road to traveling specifically to experience the unique features of the Monument. If GSENM did not exist as a management unit, visitors would still be coming through and stopping to make purchases at local businesses. Therefore, rather than examining local expenditures of all visitors to the area, it may be of more interest to look at the local economic contribution for those who came specifically to see the Monument. In other words, treat the Monument as a tourist destination to help understand its designation effect on local county economies. This means that the analysis below focuses on those who indicated that the Monument was their main destination and they stopped in Garfield and Kane communities.

Of the 766 who returned the mail survey, 31 (4.0%) did not answer any expenditure questions so they were eliminated from the data set, thus resulting in a sample size of 735. Of these, 29 did not indicate where they stopped and 9 stopped only in Coconino County, Arizona, so these were eliminated from the data set as well. That left 697 respondents who made stops in Kane and/or Garfield counties with an average party size of 2.82 and a total of 1,969 visitors.

The expenditure data were adjusted to amount spent per person, by dividing the amounts spent by number of people who had expenses. The amounts were also adjusted by whether they also stopped in Coconino County. If they stopped in Garfield and/or Kane counties, the expenditures were multiplied by one. If they stopped in Garfield or Kane and Coconino, the multiplier is 0.5. If they stopped in Garfield and Kane and Coconino, the multiplier is 0.67.

Of the 766 respondents, 697 (91.0%) said that they had stopped in one or both of the Utah counties and told us how much they had spent (including \$0). The 766 respondents identified their party size and/or the number of people the expenditures were for. In other words, the 766 respondents were giving us information about 2,155 visitors. The 697 respondents with the Utah stops were speaking for 1,969 visitors. So, we have per person Kane and Garfield expenditure data for 1,969 of 2,155 sample visitors or 91.4%. BLM estimates the number of visitors to Grand Staircase-Escalante National Monument in a year is 600,000. If we could have contacted all 600,000 visitors (population from which the sample is drawn), we assume that 91.4% or 548,400 would have stopped in Garfield and/or Kane counties and would be able to tell us how much they have spent.

Of those 697 respondents, 190 (27.6%) indicated that the Monument was their main destination. This is slightly higher than the results from the intercept survey respondents where 20.1% indicated the Monument was their main destination. This could perhaps be explained due to the fact that only about 7% of respondents contacted at overlook sites said the Monument was their main destination and they were less likely to indicate

they would be willing to complete a mail survey than those contacted at other sites. For purposes of INPLAN modeling, that 190 sub-sample represents an estimated population 149,492 (27.3% of 548,400) who filled out the expenditure questions on the mail survey instrument, indicated the Monument was their main destination, and stopped in Garfield and/or Kane County communities. The sample of 190 has a Confidence Interval of $\pm 6.7\%$ at the 95% Confidence Level given the response rate of 67%.

The IMPLAN model produced county-level (Garfield and Kane) databases divided into three impact categories; Industry Output, Employment, and Value Added. Industry Output is the single number in dollars, or millions of dollars for each industry. The dollars represent the value of that industry's production. Employment is the single number of jobs for each industry given as full time equivalent jobs. Value Added is the aggregate of four components; employee compensation, proprietary income, other property type income, and indirect business taxes. Employee compensation is the total payroll costs including benefits. Proprietary income consists of income received by self-employed individuals. Other property type income examples include payments for rents, royalties, and dividends. Indirect business taxes include excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses (taxes that occur during normal course of business but not profit or income tax).

The databases also account for the ripple or multiplier effect due to the initial increase in demand (the demand for a good will ripple through the economy until a new balance is achieved). The IMPLAN model uses three effects to measure economic impact; Direct, Indirect, and Induced effect. Direct effect is the production change associated with a change in demand for the good and is the initial effect on the economy. Indirect effect is a secondary impact caused by changing input needs of directly affected industries such as additional input needed to produce additional output. Induced effect is caused by changes in household spending due to additional employment generated by direct and indirect effects.

		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Output Industry Impact	Impact in Dollars	20,653,631	2,070,708	2,641,281	25,365,320
	No. of Industrial Sectors	21 (4.1%)	74 (14.4%)	83 (16.2%)	86 (16.8%)
Employment Impact	Impact in Jobs	434.8	40.9	46.1	521.8
	No. of Industrial Sectors	10 (1.9%)	52 (10.1%)	59 (11.5%)	70 (13.6%)
Value Added Impact	Impact in Dollars	9,883,993	1,105,146	1,555,766	12,544,844
	No. of Industrial Sectors	18 (3.5%)	72 (14.0%)	81 (15.8%)	81 (15.8%)

Table 13. Summary of IMPLAN model impacts.

In running the IMPLAN model, a Social Accounting Matrices (SAM) Type multiplier was used to simulate the ripple effect. A SAM Type multiplier is considered to be a realistic indicator since it takes into account all impacts of increased sales, jobs, or salaries as well as inter-institutional transfers resulting from the economic activity. The formula for calculating the SAM Type multiplier is to sum direct, indirect, and induced effects and divide that sum by the direct effects. Based on the overall results shown on Table 13, SAM Type multipliers for Industry Output is 1.23, Employment is 1.2, and Value Added is 1.27. It should be noted that each industry sector has a unique multiplier and what is calculated above is an overall average.

IMPLAN analysis analyzes impact categories by effects in 513 industry sectors. As summarized in Table 13, a population of 149,492 visitors to the Monument as their main destination and based on the average expenditure of our sample of 190, more than \$20.6 million would be directly spent in Kane and Garfield Counties in 21 different industrial sectors. This spending would directly support more than 430 additional full-time equivalent jobs with almost \$10 million in employment value added on. When considering the ripple effect through the economy by adding on indirect and induced effects, the total industry output impact would be about \$25.4 million in 86 sectors, employment would support more than 500 jobs in 70 sectors, and value added would increase the effect of that money by about \$12.5 million in 81 of 513 economic sectors (Table 13).

Interestingly, the Utah Division of Travel Development, Department of Community and Economic Development, estimated spending by travelers in Garfield County in 2003 to be \$32.5 million with 904 jobs in travel and tourism related employment; estimated spending by travelers in Kane County in 2003 was \$50.4 million with 1,012 jobs in travel and tourism related employment (Utah Division of Travel Development, 2005). Those 2003 estimates by the Utah Division of Travel Development and expenditure data collected in this study suggest Monument visitor spending to account for about 25% of overall visitor spending Garfield and Kane Counties, which seems realistic considering the role of the Monument as just one of many attractions in these counties.

Another interesting feature of IMPLAN is its ability to produce some data that help characterize current economic conditions in Garfield and Kane Counties. The summary output shown for the counties in Table 14, is taken from the Output, Value Added and Employment output results. As shown in Table 14, expenditures from the nearly 150,000 Monument destination visitors would contribute about 520 or over 7% of the 6,858 full-time equivalent jobs held by Garfield and Kane County residents and nearly 6% of the counties' residents salaries, property income, and business taxes and fees. Of the nearly \$400,000,000 spent in all industries, about 6.5% would be contributed by Monument destination visitors.

Again, it must be remembered this represents only those visitors who specified the GSENM as

	<i>Garfield and Kane Counties Overall</i>	<i>Contribution by Monument Destination Visitors</i>	<i>Percent of Overall Contributed by Visitors</i>
Industry Output	\$390,342,000	\$25,365,320	6.5%
Employment	6,858 jobs	521.8 jobs	7.8%
Value Added	\$211,639,000	\$12,544,844	5.9%

Table 14. Contribution of Monument destination visitors to economic conditions in Garfield and Kane Counties.

their primary destination. The Monument also contributes a greater amount to the local economies as secondary destination for visitors whose primary destination is Bryce Canyon National Park, Zion Nation Park, or other state and national attractions in Garfield County, Kane County, and Coconino County in Arizona.

Discussion

The GSENM is a national and international tourism attraction. In 2004, group sizes were relatively small (average group size is 2.8 and 90% of the groups had 2 or fewer people), visit lengths were long (70% expect to stay in the Monument area for 2 or more days), and 61% of the respondents were first time visitors. Only 14% of Monument visitors were Utahns, mostly from urban areas (Salt Lake, Utah, and Washington Counties). Nearly two-thirds of the visitors were from other states and 23% were international (Germany, Netherlands, and Canada especially). This is a transient, non local, tourism-oriented clientele.

There was also a significant designation effect. 85% of the visitors, made their first visit to the Monument in the eight years since designation (1996 to 2004), including nearly half of the repeat visitors. The vast majority of the visitors' primary reason for visiting the Monument area was recreation, but relatively few said the GSENM was their primary destination; the major destination for most are other national or state parks in the area. And while many visitors knew about the Monument before their trip and claimed to know the managing agency, only one-third actually named the BLM.

These results indicate that the GSENM is an important stop for tourists to Garfield and Kane Counties, and visitation to the Monument increased substantially as a result of its designation. But for 70% of visitors, it is actually a secondary stop along the route that visitors take to visit other more established designations like Zion and Bryce Canyon National Parks. This has both positive and negative implications for Monument management and local communities. While the Monument itself has probably not caused a large increase in the number of visitors to the area, Monument designation has clearly increased the average visitor's length of stay and expenditures in the area.

Visitors also have significant informational needs, as many are new to the Monument and they are more likely to have investigated national and state parks rather than the Monument itself. Therefore, GSENM visitors may be more likely to have national park-type expectations for roads, information, and services. However, the very general nature of the visitors' expectations for the Monument experience may, to a great extent, be formed and influenced by the sites developed and information provided by the BLM.

Some interesting Monument management trends begin to emerge from the importance-performance (I-P) analysis. Management areas needing the most attention are wildlife, directional signs to monument destinations, and monument trail markers. Secondary areas of concern are interpretation and natural history information, signs to visitor centers, and information about recreation opportunities. And even though roads were not included in I-P analysis, it seems that this may be an informational issue as well. While the BLM has little control over some of these factors, like weather, road conditions, distances between sites,

and others, these can become part of a general informational approach for the Monument. Research shows that satisfaction is often increased as visitor experiences meet their expectations, and while new roads, paving, and pullouts on the Monument may not be economically feasible or meet the goals of the Monument plan or agency mandate, better information can be provided to tell visitors the difficulties, conditions, and distances they can expect. This approach can increase visitor preparedness and satisfaction, and warning signs and information can also be used strategically to reduce visitation in primitive and outback zones. In this way, signs and information can increase visitor safety, improve experiences, reduce impacts, and generally help meet Monument zoning goals.

The I-P results for items relating to visitor services in local communities suggest that visitors would like to see improvements in certain business sectors. Eating and drinking establishments, grocery and convenience stores, and emergency medical services received high importance but low satisfaction ratings. The number, diversity, and hours of operation for these services need to be reviewed and perhaps expanded. Several other services that had low satisfaction scores but also low importance scores should also be reviewed: guides and outfitters, privately owned campgrounds, sporting goods and outdoor equipment stores, and souvenir and gift shops. Low importance ratings for these services are probably based on the relatively specific nature of the service, and do not reflect the changing patterns of visitation due to the Monument. Traditional services offered before the Monument was created, such as lodging services and government campgrounds, were rated highly. Demands for certain services like outfitters and guides and emergency medical services are probably increasing, and the Monument's effect of holding visitors in the area longer and increasing overnight stays in local communities with less experience with tourism, like Cannonville, Boulder, and Escalante. In order to meet visitor satisfaction and community development goals, local officials and business owners should evaluate and perhaps provide and advertise more of these low satisfaction services, even though some of the importance score are also relatively low.

To estimate the economic value of Monument visitors for local communities, mail survey respondents were asked to estimate their group expenditures for the trip. Two sets of analyses were conducted: descriptive statistics of group and individual expenditures, and an input-output analysis to estimate the total effects of these expenditures in different economic sectors in Kane and Garfield Counties.

The average amount spent per group was \$495. Average expenditures for groups from Utah were considerably lower (\$356) than for visitors from other states (\$500), and countries (\$615). This is especially significant since Utah visitor group sizes were nearly twice as large (mean = 4.8) as groups from other states and countries (mean = 2.5). Utah visitors spent an average of \$74 per person, compared to \$200 for visitors from other states, and \$246 for international visitors. Most of this difference was due to Utahns' lower spending levels for lodging, restaurants, and souvenir shops.

IMPLAN was used for the input-output analysis. Calculations were based on an average group size of three, expenditures that were made by visitors for whom the Monument was their primary destination, and the BLM's estimate of 600,000 annual visitors. Results indicate GSENM visitors spend \$20.6 million in Kane and Garfield Counties. This spending directly supports more than 430 full-time equivalent jobs with almost \$10 million in employment value added. When considering the ripple effect of this money in the Garfield and Kane County economies, the total impact would be \$25 million and more than 500 jobs. Value added effects increases the impact of that money by about \$13 million.

Due to multiple trip destinations and other measurement factors, these figures are just estimates. We believe they are conservative estimates of the total value of Monument visitation, however. For example, as noted above, we also found there was a significant designation effect (e.g., 85% of the visitors, made their first visit to the area since 1996). So many of the Monument visitors who may have come primarily to visit national or state parks in the area, may not have made

the visit, or would not have stayed in the area as long, if the GSENM had not been designated. To provide more exact figures, a complete economic impact study is needed.

Conclusion

The current management plan focuses on providing information and access to relatively few sites on the periphery of the Monument. The goal is to concentrate recreational use and impacts on a small number of acres. The relatively non specific expectations and tourist-oriented character of the visitors seems to indicate this visitor management approach may be appropriate and effective. Service and overnight needs will also be important factors in visitor satisfaction, and the provision of these needs, and the relationship between Monument staff and local community service providers, will be an important future concern. It is likely there are distinct differences in the expectations and preferences of first-time and repeat visitors, and visitors from Utah compared to those from other states or countries.

To monitor visitor use trends, future research should replicate the intercept methods and use the results obtained from the initial 2004 study as representative baseline data. The mail survey results add more detailed, but essentially suggestive, findings that tend to over represent relatively highly committed, interested, and longer term visitors. International and overlook visitors are also under-represented in the mail survey results.

In general, visitors felt service workers were friendly and helpful, but information availability and visitor center hospitality could be improved. The availability and type of services seems to be the greatest concern, especially related to the lack of diversity, cost, and hours of operation. These factors may be related to the relative newness of visitor service demands in many of the Monument host communities.

One of the objectives of the GSENM management plan is to help provide economic opportunities for local communities. The BLM has responded

ed to this charge by focusing the development of Monument visitor centers in the gateway communities of Boulder, Escalante, Cannonville, Kanab, and Big Water. These visitor information and interpretive centers, along with other local visitor and hospitality services, attract visitors as tourists who spend time and money in these gateway communities. Development at the periphery of the Monument, in the gateway communities and adjacent front country, keeps tourists more concentrated and less dispersed across the large expanses of the Monument. At the same time, economic benefits will accrue for local residents because of visitor spending in the gateway communities. Tourism development in any situation brings change along with potential positive and negative impacts. Positive impacts are often perceived as benefits, and these can benefit the economic, social, and environmental fabric of a locality or region. Negative impacts are considered costs and also affect the economic, social, and environmental fabric.

Collaborative planning and management can assist in minimizing costs while at the same time maximizing benefits, thus contributing to local community development. In order to assist in this endeavor, future collaborative research efforts working with stakeholder partners using the products from the front country surveys as baseline data should be explored. The focus would be on the collection of data for evaluating on-site and community education; examination visitor needs, expectations, and preferences for visitor and hospitality services; analysis of the relationships between tourism, visitor and hospitality services, and local community development; and identification of other research needs.

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